**AP Biology Meiosis and Sexual Reproduction (Chapter 10 Outline)**

*Vocabulary*: Define in your own words

Alleles-

Synapsis-

Crossing-over-

Independent assortment-

fertilization-

Gametophyte-

Sporophyte-

Nondisjunction-

Euploidy-

Monosomy-

Trisomy-

Respond to the following questions/prompts:

What are the two main ways that meiosis contributes to genetic diversity in offspring? Explain *when* it occurs in meiosis *and* what happens.

Why are meiosis and sexual reproduction important to organisms being able to respond to a changing environment? Explain. (2 pts)

What is a homologous pair of chromosomes? (1 pt)

How do meiosis I and meiosis II differ? Which one is more similar to mitosis? Explain. (3 pts)

What would happen if homologous chromosomes lined up top to bottom instead of side by side during meiosis I? Would the newly formed cells in meiosis 2 be affected? Explain.

Describe the process of spermatogenesis and explain how sperm production helps shape genetic diversity. (4 pts)

Describe the process of oogenesis. Make sure to include the terms secondary oocyte and polar body in your discussion. (6 pts)

***ABOUT THE READING:***

Write three things that you learned about the Meiosis*:*

*1.*

*2.*

*3.*